

4. A powder molding apparatus according to Claim 1, wherein said molded article holding means are configured so as to hold by engaging said molded article with a guide member formed so as to encompass at least a part of said molded article.

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5. A powder molding apparatus according to Claim 1, wherein said molded article holding means are configured so as to hold by pressing said molded article with a pressing mechanism.

6. A powder molding apparatus according to Claim 1, wherein said molded article holding means are configured so as to hold said molded article by pressure difference between fluid pressure and atmospheric pressure using a fluid pressure generating mechanism.

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11. A powder molding apparatus according to Claim 8, further comprising depressurizing means for depressurizing by suctioning out air within said powder molding space, at said die or tapered block.

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14. A powder molding apparatus according to Claim 11, wherein said depressurizing means are configured so as to start depressurizing at the point that powder is supplied to said powder molding space, and maintain the state of depressurization until at least compression molding is performed.

18. A powder molding apparatus according to Claim 16, wherein said sliding driving mechanism is configured so as to linearly drive said sliding claw.

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19. A powder molding apparatus according to Claim 16, wherein said sliding driving mechanism is configured so as to rotationally drive said sliding claw.

38. A powder molding apparatus according to Claim 36, wherein said fixing means are introduced between said die and die set, and are configured of a fixing bush for causing taper fitting of said die and die set.

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39. A powder molding apparatus according to Claim 36, wherein said fixing means are configured of an actuator which presses and fixes said die to said die set with a pressing member introduced therebetween.

40. A powder molding apparatus according to Claim 36, wherein said fixing means are introduced between said die and die set, and are configured of a fluid pressure fixing member which presses and fixes said die to said die set by pressurizing a pressure fluid filled therein.

44. A powder molding apparatus according to Claim 36, wherein said die set is configured so as to transport said mold between a powder supplying stage, a compressing molding stage, and a molded article extracting stage.

48. A powder molding apparatus according to Claim 46, wherein said die is disposed on a transporting table, and wherein said transporting table is configured so as to move between a powder supplying stage, a powder compressing stage, and a molded article extracting stage, in a direction orthogonal to the moving direction of said upper and lower punch units.

52. A powder molding apparatus according to Claim 49, wherein said upper end portion of said one driving shaft is linked to a upper mold supporting plate attached to said upper punch, so that said upper mold supporting plate is lowered with said one driving shaft while raising a lower mold supporting plate with said other driving shaft, by said driving sources, thereby effecting compression molding.

53. A powder molding apparatus according to Claim 49, wherein said driving shafts are ball screws axially supported by said base, and said driving sources are servo motors linked to said ball screws by timing belts.

56. A powder molding apparatus according to Claim 54, wherein respective ball screws are linked to said hollow outer cylinder and said inner cylinder, and wherein servo motors serving as driving sources are linked to said ball screws by timing belts.

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57. A powder molding apparatus according to Claim 54, wherein said hollow outer cylinder is supported by a movable base, said inner cylinder is supported by a fixed base, and said die is disposed and fixed on a frame portion integrally extended from said fixed base.

58. A powder molding apparatus according to Claim 54, wherein said hollow outer cylinder and said inner cylinder are supported by a common movable base, said die is disposed and fixed on a transporting table provided separately from said movable base, and said transporting table is configured so as to move between a powder supplying stage, a powder compressing stage, and a molded article extracting stage.

61. A powder molding apparatus according to Claim 59, wherein said scraping blade is formed of a ceramic.

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62. A powder molding apparatus according to Claim 59, wherein a powder supplying opening of said powder supplying tube is positioned so as to be offset outwards

from the center of said powder injecting hole, and also passes through the ceiling of said powder storing unit and is inserted to the inside thereof.

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63. A powder molding apparatus according to Claim 59, wherein a tapered portion is formed at an edge of said powder injecting hole so as to fit with the blade tip of said scraping blade when closing off said powder injecting hole.

64. A powder molding apparatus according to Claim 59, wherein said scraping blade is provided independently from said powder storing unit, passes through a slit formed in said powder storing unit and extends into said powder storing unit, and is driven to perform scraping action by an actuator disposed outside said powder storing unit.